# ACP-105

**Cat. No.:** HY-112256

**CAS No.:** 899821-23-9

**Molecular Formula:** $C_{16}H_{19}ClN_2O$

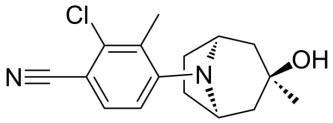
**Molecular Weight:** 290.79

**Target:** Androgen Receptor

**Pathway:** Vitamin D Related/Nuclear Receptor

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 103 mg/mL (354.21 mM)

* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 3.4389 mL | 17.1945 mL | 34.3891 mL |
| | 5 mM | 0.6878 mL | 3.4389 mL | 6.8778 mL |
| | 10 mM | 0.3439 mL | 1.7195 mL | 3.4389 mL |

Please refer to the solubility information to select the appropriate solvent.

## BIOLOGICAL ACTIVITY

**Description**

ACP-105 is an orally available, selective amd potent androgen receptor modulator (SARM), with $pEC_{50}$s of 9.0 and 9.3 for AR wild type and T877A mutant, respectively.

**$IC_{50}$ & Target**

pEC50: 9.0 (AR wild type), 9.3 (AR T877A mutant)[1].

**In Vitro**

ACP-105 is an orally available, selective amd potent androgen receptor modulator (SARM), with $pEC_{50}$s of 9.0 and 9.3 for AR wild type and T877A mutant, respectively. The half-lives of ACP-105 (compound 1) in human hepatocytes is measured and found to be 5.0 h[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

ACP-105 enhances freezing in both sham-irradiated and irradiated mice (effect of ACP-105: F=5.44; p=0.028). For MAP-2 immunoreactivity in the cortex of sham-irradiated mice, there is a brain area×ACP-105 interaction (F=6.655; p=0.0027). While ACP-105 reduces MAP-2 immunoreactivity in the sensorymotor cortex, there is a trend towards increased MAP-2 immunoreactivity in the enthorhinal cortex[2].

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## PROTOCOL

**Animal Administration** [2]

Mice[2]

Two-month-old C56Bl/6J female mice are kept on a 12:12 hr light-dark schedule (lights on at 6 AM) with lab chow and water given ad libitum. Following i.p. anesthesia (ketamine, 80 mg/kg and xylazine, 20 mg/kg), mice are sham-irradiated (n=7 sham vehicle-treated mice and n=7 ACP-105-treated mice) or irradiated (n=8 vehicle-treated mice and n=7 ACP-105-treated mice) using a dose of 10 Gy in a Mark 1 Cesium Irradiator. Twenty-four hours following irradiation, the mice are implanted with Alzet minipumps filled with ACP-105 at 1 mg/kg/day or 1.09 mg/200 µL in 10% Tween in saline or vehicle. Behavioral testing starts two weeks after irradiation. Mice receives three trials per day for three subsequent days. Mice are tested for fear conditioning in week 2. During contextual fear conditioning, mice learn to associate the environmental context with a mild foot shock. Contextual conditioned fear is assessed during the first 3 minutes of the contextual test trial when freezing behavior is most robust. Cued conditioned fear is assessed during the presentation of the tone (the last 3 minutes of the trial)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Metabolites. 2021 Feb 1;11(2):85.
- Drug Test Anal. 2021 Oct 29.
- Drug Test Anal. 2020 Dec 7.
- Drug Test Anal. 2020 Aug 27.

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## REFERENCES

[1]. Schlienger N, et al. Synthesis, structure-activity relationships, and characterization of novel nonsteroidal and selective androgen receptor modulators. J Med Chem. 2009 Nov 26;52(22):7186-91.

[2]. Dayger C, et al. Effects of the SARM ACP-105 on rotorod performance and cued fear conditioning in sham-irradiated and irradiated female mice. Brain Res. 2011 Mar 24;1381:134-40.



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